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Frederiksen et al.(10) **Pub. No.: US 2014/0362707 A1**(43) **Pub. Date: Dec. 11, 2014**(54) **SELECTING BETWEEN NORMAL AND
VIRTUAL DUAL LAYER ACK/NACK**(71) Applicant: **Nokia Siemens Networks Oy**, Espoo
(FI)(72) Inventors: **Frank Frederiksen**, Klarup (DK);
Troels E. Kolding, Klarup (DK); **Xiang
Guang Che**, Beijing (CN)(73) Assignee: **Nokia Siemens Networks Oy**(21) Appl. No.: **14/465,954**(22) Filed: **Aug. 22, 2014****Related U.S. Application Data**(63) Continuation of application No. 13/770,384, filed on
Feb. 19, 2013, now Pat. No. 8,861,472.**Publication Classification**(51) **Int. Cl.**
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(2013.01)USPC **370/241**; **370/329**(57) **ABSTRACT**

An allocation of downlink resources is received, which are monitored on I layers for data. A resource-specific bit (ACK/NACK) is generated for each of those resources. From a pattern of those resources is selected an algorithm from among a first algorithm that bundles them in a first mode and a second algorithm that bundles them in a second mode. The selected algorithm is used on the generated resource-specific bits that correspond to the downlink resources, bundled according to the selected mode, to generate I reply bits which are then transmitted. At the network side a NACK reply bit is received, based on a pattern of the allocated downlink resources, a first algorithm that bundles them in a first mode or a second algorithm that bundles them in a second mode is selected. A bundling window and layer combination are determined from the selected algorithm, which gives the resource for retransmitting the NACK'd data.

